Title (en)

INPUT DEVICE FOR PROVIDING MULTI-DIMENSIONAL POSITION COORDINATE SIGNALS TO A COMPUTER

Title (de)

EINGABEVORRICHTUNG ZUM LIEFERN MULTIDIMENSIONALER POSITIONSKOORDINATESIGNALE AN EINEN RECHNER

Title (fr)

SYSTEME D'ENTREE SERVANT A TRANSMETTRE A UN ORDINATEUR DES SIGNAUX DE COORDONNEES DE POSITION A DIMENSIONS MULTIPLES

Publication

EP 0842489 B1 20000607 (EN)

Application

EP 96925582 A 19960731

Priority

- US 9612532 W 19960731
- US 50908295 A 19950731

Abstract (en)

[origin: WO9705567A1] A user input system for inputting computer signals, such as a joystick, has an elongated member or handle that is movably received by a housing. The handle is capable of moving in at least three perpendicular directions, i.e. along X, Y and Z axes, and is capable of being rotated about at least one of the three axes. In a first embodiment, a pair of light emitting diodes ("LEDs") are mounted at an end of the handle and oriented toward the interior of the housing. The LEDs are strobed to alternately project light downward into the housing. A light detecting element, such as a two-dimensional position sensing device ("PSD"), two one-dimension PSDs, or a four quadrant photodiode, is positioned opposite the LEDs, and mounted to the housing to receive the light from the LEDs to produce signals. The signals are converted from analog to digital and input to a microprocessor. The microprocessor, employing trigonometric methods, calculates the position and orientation (i.e. rotation) of the handle and outputs the coordinates to a host computer. The joystick preferably includes switches that produce signals and a slidable member that produces a variable signal, all of which are also output to the computer. In a second embodiment, the LEDs are mounted to the housing to project the light upward and the light detecting unit is mounted at the end of the handle.

IPC 1-7

G06K 11/08

IPC 8 full level

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